



Windows to Wildlife



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The Idaho Watchable Wildlife Committee is comprised of the following agencies and organizations:

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U.S. Forest Service

Idaho Department of Parks & Recreation

Idaho Audubon Council

U.S. Bureau of Reclamation

Idaho Department of Commerce

Idaho Department of Transportation

U.S. Fish & Wildlife Service

Idaho Department of Fish and Game

The Journey of Migration

*By Vicky Runnoe, Salmon Region Conservation Educator,
Idaho Dept of Fish and Game*

As the calendar turns toward spring, the winter-weary find themselves searching for something, anything to prove that winter is losing its grip on the land; a breath of warm air; a tiny nubbin of green in the tulip bed; the song of a bird. It is this last, perhaps, that holds the most hope for the changing of the seasons. For the first songs of the spring herald the beginning of the great yearly cycle of migration.

Migration has captivated mankind since time immemorial. It is mentioned in the Bible and referenced in Homeric sagas. The ancients pondered the seasonal return and subsequent departure of birds, often arriving at some rather bizarre conclusions to explain the phenomenon. Aristotle surmised that swallows vanished because they hibernated in tree cavities. He also thought redstarts turned into robins at certain times of the year. Others believed swallows turned into frogs and birds wintered on the moon. More modern thinkers were equally stumped to explain many birds annual appearance and disappearance. Even today we are still amazed when we realize that the Rufous Hummingbird zipping around our yard flew to Idaho from central Mexico and may very well continue to Alaska before stopping. And we realize that the unknowns still outweigh the knowns regarding the mysteries of migration.

What we do know begins in the spring before the birds take wing northward. As spring days become warmer, the length of the light period becomes longer each day. This change stimulates the hypothalamus in the bird's brain, causing an increase in hormonal secretions that begin a period of significant weight gain in migratory species. Food intake increases by as much as 40%, increasing fat deposits. Normal fat loads of short to middle distance migrants may increase to 15% of the bird's total body weight. Long-distance migrants have a fat loads from 30% - 50% of their total body weight.

It is this fat that provides the fuel necessary for migration. During this period of gorging, birds tend to select foods with higher fat contents. Fruits are high in carbohydrates, which are easily converted to fat and many migratory birds actively seek out sources of fruit prior to migration. In addition, stored carbohydrates are converted to fat to be used during migration. Fat is the single most energy-rich substance produced by animals, making it the perfect fuel for long-distance flights. Fat deposits allow birds to travel amazing distances during a single flight: 620 miles for songbirds and 6,000 miles for shorebirds. Since migrating birds retain this ability to rapidly deposit fat during

Photos above: Tree swallow by Gary C. Will, American Robin by Ken Retallic

MIGRATION CONTINUED

migration, refueling stops quickly replenish used fat reserves allowing the bird to resume its journey.

Along with this amazing period of weight gain, birds also exhibit an increase in activity called “pre migratory restlessness” or *zugunruhe*. Occurring mainly at night, this activity seems to be related to the distance that the bird will be traveling.

The actual moment of departure seems to be dependent upon the weather. Clear skies and a following wind are key criteria for beginning migration. During the spring, prevailing winds tend to come from the south, following warm air northward. The reverse is true in the fall. Birds beginning their migration during these conditions will receive the benefit of a tail wind to help them on their way. Shifts in wind directions caused by frontal systems often force birds from the air, temporarily halting migration. Occasionally, weather conditions conspire to cause a “fallout” as thousands upon thousands of migrants descend to the ground to escape a brewing storm. Some of the most spectacular of these events occur along the Gulf Coast where exhausted migrants crossing the Gulf of Mexico descend to the ground the minute they reach land. Here they rest and forage, readying for the next leg of their journey.

It was not until the advent of radar that the phenomenon of night migration was truly recognized. As sunset approaches, migrating birds begin to get restless. They are usually back on the wing within the hour following sunset. Migration peaks around midnight and wanes until dawn. Migrating birds were and can still be seen against the backdrop of a full moon, but radar allowed the true scope of nighttime migration to be seen and studied.

The large majority of night migrants have been found to be songbirds such as warblers, sparrows, thrushes, flycatchers, orioles, tanagers, and vireos. Flying at night provides a variety of advantages for these birds including a calmer atmosphere with cooler temperatures. Night flight also allows birds to feed on insects during the day that would not be available at night. Birds such as shorebirds and waterfowl will migrate either during the day or night, the weather apparently being the key to their migration. Strictly diurnal (daytime) migrants include such familiar birds as hawks, robins, swallows, crows, jays, woodpeckers, bluebirds, and some finches.

Migration generally occurs at lower altitudes than might be expected. Some birds, waterfowl and shorebirds in particular, have been recorded traveling at 15,000 - 20,000 ft. Some shorebirds such as white-rumped sandpipers have been recorded by radar migrating at 22,000 ft. Their smaller cousins, however tend to migrate at altitudes below 2,000 feet.

Migrating birds tend to arrive on their breeding grounds in two waves. The first is composed of the hardier birds, the seedeaters such as the sparrows and towhees. In Idaho the Spotted Towhee is an early arrival along with the Red-winged Blackbirds and Western Meadowlarks. The second wave of arrivals includes the insect eating warblers, flycatchers, tanagers, and vireos. Hearing the song of a Yellow Warbler in the brush is a sure sign that that second wave of migrants has begun to arrive.

While radar and other tools have helped us uncover some of the mysteries of migration, the biggest mystery still remains. How do they find their way? Numerous theories have been put forward, but a definitive answer has remained elusive. Ornithologists



Bluebird by Marty Morache

Rufous-sided towhee by Gary C. Will



believe that migrating birds navigate using a variety of means, referred to as “compasses” rather than any single method.

The first of these bird compasses to be discovered was the one based upon the sun’s position in the sky. Like us, animals can use the sun to determine direction and since they have an internal biological clock, are able to continue to determine direction throughout a 24-hour period. Night migrants obviously cannot utilize the sun and studies shifted to a potential star compass. These studies have indicated that during their first year, birds learn the layout of the constellations and the position of the North Star. By memorizing the spatial relationship among constellations, the birds in effect, memorize the night sky and can then use it for navigation.

Birds also appear to possess a magnetic compass. Unlike our own compasses, a bird’s magnetic compass can detect the “dip angle” of the lines of force that make up the magnetic field. These lines incline toward the earth near magnetic north. Researchers in Germany have discovered that birds can detect this downward inclination and determine the direction of north. Another means that birds seem to utilize during migration is the pattern of polarized light in the sky. Not only can polarized light be detected through cloud cover, it also is seen as a pattern that can be used to determine direction particularly at dawn and dusk when the patterns are especially obvious directly overhead.

Exactly how these assorted compasses work in concert to aid navigation is not understood. Much seems to be under genetic control and we are only beginning to understand how genetics affects behavior. One thing that ornithologists agree upon is that we have only scratched the surface in our quest to understand bird migration. Our attempts to understand migration have not, however, diminished our sense of awe. Like the ancients, we remain captivated by the incredible abilities of these amazing bundles of feathers with which we share our world.

Viewing Birds by Volunteers

By Diane Evans Mack and Lauri Hanauska-Brown, Nongame Wildlife Biologists, Idaho Department of Fish and Game

What do three teachers, a coast guard officer, coffee shop owner, wildlife rehabilitator, retired engineer, banker, house wife, nuclear chemist, university student, university professor, Forest Service information assistant, and photographer have in common? They all like birds — big birds. This varied contingent volunteered as nest monitors last summer, watching peregrine eyries in eastern Idaho and osprey and eagle nests near McCall.

For some, volunteering is slipped in around a regular 9-5 job, providing an opportunity to shake off the daily pressures by sitting quietly on a knoll overlooking an osprey platform. For others, it's a new direction after retirement, a way to remain active and pursue an interest in birds. In the case of Bob Herold of McCall, it was also an opportunity to spark that interest in his 8-year old grandson, who accompanied him on each nest visit. Sometimes the birds themselves create the opportunity to become involved. That was how it happened for Esther Mulnick in McCall. A pair of bald eagles, looking for a new nest site, built a nest in clear view of Esther and husband John's living room. The daily comings and goings of the eagles proved irresistible. Esther and John invested in a spotting scope, and casual observations quickly grew to hours glued to the window. Two seasons, framed photos of "their" first eagle chick, and several heart-stopping incidents later, Esther readily admits she's obsessed.

The objectives of the nest watching programs are to determine how many sites are active, which nests successfully fledge young, and how many young take wing. In the case of bald eagles and peregrines, Idaho Fish and Game has a commitment to the U.S. Fish and Wildlife Service to obtain this information. Peregrines were removed from the Endangered Species List in 1999, but the Service established a monitoring period through 2015 to ensure that populations remain stable. Bald eagles are slated to be removed from the Endangered Species List soon and will enter a similar monitoring period. Ospreys are not listed under the Endangered Species Act, but their populations are of interest because of their close association with rivers and lakes and the potential to reflect problems with water quality or fish populations. Beyond the basic productivity information, the rare occasion to have year-round observations helps to pinpoint critical dates such as nest building, incubation of eggs, hatching, and fledging that aren't available for all sites. For example,



Some McCall area volunteers. Photo by Diane Evans Mack

the eagles outside Esther's window make an appearance every so often even in fall and winter, and they began working on their nest again in late January, warning us that we should be ready for early nesting throughout the region this year.

With 33 known peregrine sites statewide (14 in southeast Idaho) and over 20 eagle and 30 osprey nests in the McCall/ Cascade area alone, the Nongame Program is increasingly looking to volunteers to stretch resources. As it turned out, it proved fairly easy to find individuals curious about birdlife with a hidden desire to

play detective. The local Audubon chapter in southeast Idaho initially provided all the volunteers for falcon monitoring. Word spread quickly, however, and interested birders and novices alike joined the team. Volunteers ranged in skills from those who would be considered local bird experts to those without even a simple pair of binoculars. All volunteers were eager to learn and willing to dedicate the time needed to learn and enjoy. They were not disappointed by what they saw.

Ospreys and eagles are large birds of prey with conspicuous nests while peregrines nesting on ledges or crevices of cliffs are somewhat secretive and difficult to find. Most volunteers were assigned one or two nests and asked to visit four or five times during the season to determine first if the nest was occupied, and ultimately how many young fledged. Volunteers were trained on what to look for, how to interpret behaviors seen at the nest, and how to observe from a safe vantage point to minimize disturbance. Observers of some peregrine towers had to simply observe from the safe distance of their vehicles. Other dedicated volunteers hiked up to 3 miles to look for the elusive falcons. Observers endured wind, rain, and the burning sun. There were, however, no complaints!

Volunteer programs offer mutual rewards. Our nest monitors learned a bit of biology, became more familiar with their areas natural environment, and went home knowing they donated much-needed resources to continue important projects for the Nongame Program. Most importantly, each volunteer had a unique experience that connected them more closely to the birds.

For IDFG's part, the time and data that volunteers contributed were invaluable. More than that, though, it was about sharing our enthusiasm for wildlife and fostering what we hope will be a growing network of wildlife supporters.

For more information on volunteer opportunities with the Nongame Program, contact your regional IDFG office.



Osprey nestlings counted by volunteers, by Wayne Melquist.

Pygmies in the Valley

Scott Jay Bailey, Nongame Biologist, Magic Valley Region

Pygmy rabbits (*Brachylagus idahoensis*) are the smallest rabbits in North American. These small bundles are known for their habit of digging and using extensive burrow systems. They typically occur in areas with tall, dense stands of sagebrush and deep, friable soils. There has been concern for the species because they no longer occur in many historically occupied areas and there has been widespread loss of suitable sagebrush habitats throughout the west. As a result, pygmy rabbits are a species of concern in several western states, including Idaho and listed as federally Endangered in the Columbia Basin of Washington State.

There are many knowledge and data “holes” for Idaho’s pygmy rabbits, as well as other states. The Idaho Department of Fish and Game Nongame Program, U.S. Forest Service, and Bureau of Land Management have all devoted staff time and financial resources to enhance understanding of Idaho’s pygmy rabbits. The Bureau of Land Management (BLM) and the IDFG Nongame Program have funded several ongoing pygmy rabbit studies headed by Dr. Janet Rachlow of the University of Idaho. The focus of these studies are to evaluate census techniques and collect information to better understand distribution, abundance, reproductive behavior, juvenile dispersal, genetic diversity, and other aspects of pygmy rabbit biology.

One project, located in the Magic Valley Region focuses on determining the distribution of pygmy rabbits in the BLM Shoshone Field Office Area. This is an area roughly defined by the Snake River north to the Sawtooth National Forest, and King Hill Creek east to the Great Rift lava flows. The work began in the summer of 2003 when technicians Bob Robbins and Kim McCreery visited about 150 sites to evaluate potential habitat and determine presence/absence of pygmy rabbits. The sites were identified using a computer-based habitat model and review of historical and recent observation records. Bob and Kim observed two pygmy rabbits and identified 12 sites where observations of sign (e.g., scat and burrows) suggested the presence of pygmy rabbits.

In 2004, Dr. Rachlow and biologist Jim Witham re-visited the 12 possible pygmy rabbit sites identified in 2003. This work was completed primarily during winter months, when snowcover facilitated observing pygmy rabbits and their sign more readily. During this effort, they confirmed the presence of pygmy rabbits at sites near Mormon and Magic reservoirs by observing over 100 burrows and approximately 35 individual rabbits. In addition to confirming the presence of pygmy rabbits at these sites, they were able to live-trap and collect tissue samples from approximately 25 individual rabbits. These samples will be analyzed by U of I graduate student, Wendy Estes-Zumpf, as part of a statewide assessment of genetic diversity among pygmy rabbit populations (read more on this in the next issue of Windows to Wildlife).

Thus far in 2005, the U of I group and IDFG has completed a preliminary study within a small portion of the study area to assess the effectiveness of aerial surveys for detecting pygmy



Magic Valley Pygmy Rabbit. By Jim Withman

rabbits. This work was conducted using a fixed-wing aircraft followed by ground-based confirmation searches of potential pygmy rabbit burrow systems identified during the aerial survey. The results of this study suggest that this is a viable method to search for pygmy rabbits over large geographic areas - we discovered and confirmed additional active burrow systems between the previously identified Magic and Mormon reservoir sites, suggesting linkage between these populations. In addition to the work completed by U of I, the BLM and IDFG have identified other previously undiscovered populations in the Magic Valley region this year. We all plan further pygmy rabbit studies in 2005 and beyond. These studies are likely to include additional aerial and ground-based searches and further collection and analysis of genetic samples.

Biologists do remain troubled by the absence of pygmy rabbits at historically occupied sites. Habitat loss and degradation continue to threaten pygmy rabbits in Idaho, although discovery of new populations provide a glimmer of hope for the future of this species in Idaho. Our efforts are furthering knowledge and understanding of pygmy rabbits and will help us improve decisions regarding management of the species and its habitats in Idaho.

Please report pygmy rabbit sightings to your local Idaho Department of Fish and Game regional office. Pygmy rabbits can be distinguished from the more common Mountain Cottontail by their smaller overall size and lack of a distinctive white tail.

Exhibit—Earth as Art: Views of Our World from Space

Idaho Museum of Natural History
Pocatello, April 19—July 5, 2005

This exhibit showcases some examples of satellite imagery and offers a first-hand look at what these images reveal about how Idaho’s rangelands are changing and their causes.

208/282-3317

THANK YOU

Thank You to All Contributors

Our sincere thanks go to all supporters of the Nongame Program, financially or otherwise. Without your contributions, the Nongame Program could not conduct critical research, hold wildlife viewing events, or publish this newsletter. The following people made direct donations, purchased or renewed a wildlife license plate, or let us know of their tax checkoff donation. These lists represent only newsletter subscribers who have returned a subscription form between December 1, 2004–February 28, 2005, and marked the contributor box. Many subscribers not listed here have contributed generously and Idaho's nongame wildlife thanks all of you.

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Bon Voyage

After 4 years as the Windows to Wildlife Editor, it is time for me to depart. I have thoroughly enjoyed my duties as Watchable Wildlife Coordinator, especially talking to many of you. The many stories of wildlife watching, wildlife encounters, and outdoor experiences have been a joy to hear. I hope you all continue to enjoy all of Idaho's wildlife. Happy Viewing!

—Aimee Pope



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Events/Workshops

Earth Day—April 23

Nampa—Deer Flat National Wildlife Refuge 9am-Noon. Litter's not for Critters. Help kick off the New "Adopt-a-Refuge program by helping clear litter around Lake Lowell. 208/467-9278



Boise—8am-Noon, community environmental service projects. 10am-2pm Native Plant Sale at MK Nature Center Backyard. 1pm-5pm booths and kids activities at the MK Nature Center and adjacent Municipal Park. 208/334-2225

International Migratory Bird Day

Pocatello—May 14 at the Pocatello Zoo. 208/234-6264

Idaho Falls—May 14 at Market Lake 9am-12:30pm. Birding tours, educational booths, and kids activities. 208/525-7290

Boise—May 14 at the MK Nature Center 11am-4pm. Bird viewing, kids activities, bird exhibits, and live birds. Early morning bird walks in addition. 208/334-2225

Salmon—May 21 at the Sacajawea Center 8am-Noon. Birding tours each hour, bird banding station, and various bird and bat exhibits. 208/756-2271

Project Wild Workshops

To register, contact Lori Adams, IDFG, 208/287-2889 or ladams@idfg.state.id.us

Introductory Workshop

April 8-9, Boise, Idaho Falls, and Nampa

June 21-22, Boise

July 27-28, Salmon

Advanced Workshops

Wild about Salmon, July 7-8, Boise

Wild in Yellowstone Ecosystem, July 31-Aug 5, Harriman State Park

Women in the Outdoors—June 18

Boise, 8am-6pm, Idaho Parks and Recreation office, 5657 Warm Springs Ave. Learn hands-on skills in fly fishing, photography, canoeing, handgun safety, and much more from one-on-one training with knowledgeable instructors. 208/334-4199



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